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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/636,059	08/07/2003	John Michael Borkenhagen	ROC920030163US1	1027
7590	11/10/2005		EXAMINER	
Robert R. Williams IBM Corporation, Dept. 917 3605 Highway 52 North Rochester, MN 55901-7829			HEIN, GREGORY P	
			ART UNIT	PAPER NUMBER
			2188	

DATE MAILED: 11/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>
	10/636,059	BORKENHAGEN, JOHN MICHAEL
	<b>Examiner</b>	<b>Art Unit</b>
	Gregory P. Hein	2188

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE \_\_\_\_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 07 August 2003.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) 1, 5, 7 - 9, and 18 is/are allowed.
- 6) Claim(s) 3 - 4, 6, and 17 is/are rejected.
- 7) Claim(s) 2 and 10 - 16 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 07 August 2003 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____ .
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>08/07/2003</u> .	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____ .

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The information disclosure statement (IDS) submitted on 08/07/2003. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

### ***Drawings***

2. The drawings submitted on 08/07/2003 have been approved by the examiner.

### ***Specification***

3. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: Specification does not provide sufficient antecedent basis for removing an address range and removing a segment in claims 5 and 6, respectively, casting out a snoop directory entry in claim 5, or locking and unlocking the timer counter, the first refill counter, and the second refill counter in claim 13.

Applicant should update status of case 10/403,157 cited in ¶2 line 1 of application for patent.

### ***Claim Objections***

4. Claims 2 - 4 and 10 - 16 are objected to because of the following informalities:

Claim 2 is objected to because of the following informalities: Line 1 of claim 2 reads, "...further comprising comprising the steps..." Use of "comprising" here is repetitive.

Claim 10 is objected to because of the following informalities: Line 8 reads "...control capable making a..." Examiner suggests "...control capable of making a..."

All dependent claims are objected to as having the same deficiencies as the claim they depend from.

Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 3 – 4 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 3 reads "...the steps of increasing the first portion and the second portion of the memory directory changes the first portion and the second portion by not more than a predetermined fraction of the directory memory." Finiteness of cache memory precludes increasing both the first and second portion simultaneously.

Claim 4 rejected for the same deficiencies as claim 3 which it depends from.

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claim 6 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 6 recites, "...removing a segment of a current address range of the first portion of the directory memory..." This is ambiguous in that it is unclear if the address range is a cache address range to be reallocated or if the address range refers to main memory locations to be remapped into new cache locations.

#### ***Claim Rejections - 35 USC § 101***

9. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 17 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. A computer program product not embodied in a computer readable medium is unpatentable subject matter.

***Allowable Subject Matter***

10. Claims 1 – 2, 5, 7 – 16, and 18 are allowable over the prior art. Claims 2 and 10 - 16 are objected as set forth above.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US 6901485 – Arimilli et al.

US 6662216 – Arimilli et al.

US 6480941 – Franke et al.

US 6457100 – Ignatowski et al.

US 6470442 – Arimilli et al.

US 5946709 – Arimilli et al.

US 6725336 – Cherabuddi et al.

US 2003/0019913 – Shimizu et al.

US 6,725,344 – Pawlowski et al.

US 6560674 – Hosogi et al.

US 6516387 – Auracher

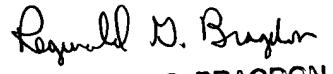
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gregory P. Hein whose telephone number is 571-272-4180. The examiner can normally be reached on M-F 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mano Padmanabhan can be reached on 571-272-4210. The fax phone

number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

10/27/05   
Gregory Hein

  
REGINALD G. BRAGDON  
PRIMARY EXAMINER